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ACADEMIC PREPARATION

- 1987 Ph.D., Mathematics, University of Miami
University of Miami Fellow
- 1982 B.S., High Honors, Mathematics, University of Florida
Phi Beta Kappa

ADMINISTRATIVE APPOINTMENTS AND EXPERIENCE

Dean, College of Arts & Sciences, University of North Texas (July 2010 – Present)

- Dean of UNT's largest college with 18 departments, over 1000 faculty and staff, half of UNT's 36,000 students and a yearly budget over \$45 million
- Assumed dean position at a time of tumultuous change at UNT, bringing proven management skills to help stabilize university leadership and provide continuity to on-going change initiatives.
- Guiding CAS as the lead college in UNT's push to emerge as a major research university.
 - Successfully directing hiring of senior scientists in multiple research clusters. Goal is to establish internationally recognized centers of excellence in areas such as computational biochemical modeling, developmental physiology, renewable bioproducts, plant signaling and biocultural conservation.
 - Providing targeted, high impact investment in the humanities and social sciences to balance significant funding provided to advance the science research enterprise.
 - Collaborating with department chairs and faculty to develop outcome directed plans to enhance scholarly and instructional activities. Identifying existing and potential niches of strength to build towards national prominence.
 - Significantly broadened development and profile-raising activities. Increased expectations for college development officers, providing training and raised development expectations for department chairs, and refocused college advisory board to more development and profile raising activities.

Member, President's Planning Committee, University of North Texas (2010 – Present)

- Committee developed consolidated university-level strategic plan to guide UNT's growth and advancement.

Member, University Public Relations and Image Council, University of North Texas (2010 – Present)

- Council develops strategies to increase profile of UNT, improve alumni engagement, cultivate public and private financial support, and promote athletics.

Co-Organizer, United States-Mexico Technology Summit (2010)

- Led UNT partnership with the Dallas Regional Chamber and TechAmerica in organizing the first annual US-Mexico Technology Summit highlighting business and R&D collaboration opportunities between Mexican and US companies. Summit featured presentations by the White House Deputy CTO Andrew McLaughlin, Dallas Mayor Tom Leppert, Consul General of Mexico Juan Carlos Cue-Vega, as well as Mexican and US business leaders. Planning is underway for the 2011 summit after a successful first year event,

University Coordinator for External Consultants, University of North Texas (2008 – 2010)

- Working with the UNT President and VPs, directed and managed activities of external consultants to enhance the profile of UNT, secure external funding for research and instructional activities and establish broader corporate and government collaborations.

Dean, Toulouse School of Graduate Studies, University of North Texas (July 2009 – June 2010)

- Raised the graduate school to a leadership role in supporting UNT's objectives as a comprehensive national research university. .
- Significantly enhanced financial support for graduate students.
 - Directed university-wide increase in graduate student stipends and new management structure for graduate student funding.
 - Implemented graduate student tuition scholarship program to provide tuition and fee support.
- Developed a culture of evidence-based evaluation of programs.
 - Led development of new data structures and quality metrics to support graduate program assessment.
 - Directing analysis of comprehensive national database of faculty productivity.
 - Applied evaluations to make resource allocation decisions, including allocation of departmental resources, graduate student support, and new program development.
- Member of leadership team that developed UNT's first strategic research plan.

Interim Dean, Toulouse School of Graduate Studies, University of North Texas (January – June 2009)

- Hired Associate Dean for Research and Professional Development to enhance graduate school's role in supporting graduate student research and professional preparation.
- Developed structure for allocating graduate student budget lines to departments and for increasing graduate student stipend and tuition support.
- Reallocated funds and activities to partner with departments for targeted, intentional graduate student recruitment.
- Enhanced cooperation with UNT Office of Research and Economic Development to encourage research and increase external funding for graduate students.
- Revised graduate student policies to reflect university aspirations.
- Established venues for regular communication between graduate school and departments.
- Initiated revision of graduate school website and other communication portals.

- Developed FY2010 budget and budget priorities. Reallocated portions of current budget to support refocused activities.

Associate Dean for Administrative Affairs, College of Arts & Sciences, UNT (2004 – 2008)

- Responsibilities reflected an executive role and portfolio covered wide range of faculty personnel and administrative duties within a college of 18 departments, 400 faculty and half of UNT’s 35,000 students.
- Reported to the Dean and served as acting dean in his absence.
- Highly effective in finding equitable solutions to difficult faculty personnel issues.
- Provided administrative oversight of construction for two new science research buildings each costing over \$30M.
- Developed “Best Practices” for annual faculty merit evaluations and directed implementation in college departments.
- Significantly expanded Junior Faculty Mentoring and faculty development programs, contributing to increased faculty retention, scholarship and external funding.
- Directed college diversity initiatives, including enhanced mentoring of women and minority faculty, sponsoring diversity events and professional development workshops.
- Managed budget to support college’s faculty development and diversity activities.
- Enhanced data-driven decision making for college resource allocation.

OTHER ADMINISTRATIVE SERVICE AND EXPERIENCE

Search Committee for UNT System Chief Information Officer (2010)

- Member of committee conducting national search for new position responsible for system wide IT functions, including implementing shared services model for select operations.

Search Committee for UNT President (2010)

- One of two deans selected to serve on successful presidential search committee.

Search Committee for Vice Chancellor for Academic Affairs for the UNT System (2010)

- Member of search committee that helped select VCAA for the UNT System.

Member, Texas Higher Education Coordinating Board – Graduate Education Advisory Committee (2009-2010)

- The Graduate Education Advisory Committee, comprised of graduate school deans, provides guidance and direction to the THECB regarding graduate education issues in Texas.

Chair, President’s Task Force for Recruiting the Texas State Historical Association (TSHA) to UNT (2007-2008)

- Led team of deans, development personnel, department chairs and faculty in successful proposal to relocate TSHA from the University of Texas to UNT.
- Secured \$500,000 commitment for endowed chair position in Texas History. Helping lead development efforts to bring endowment to \$1.5 M.
- Represented UNT President in proposal presentations to TSHA Board of Directors.
- Negotiated legal agreements between UNT and TSHA.
- Managed facility renovation and TSHA staff relocation.

Facilitator, UNT Office of Development Retreat (2009)

- Led senior development staff in identifying capital campaign themes and initiatives.

Chair, Search Committee for Director of Research Development (2008)

- Led successful national search to fill a key position supporting UNT's goal to increase faculty success in obtaining competitive federal research grants.

Administrative Representative, Ad-hoc Committee for Establishing Charter and Operating Policies for UNT College of Engineering (2008)

- Appointed by Provost to serve as resource to College of Engineering faculty committee on charter and policy creation.

Member, UNT Disability Task Force (2007 – 2008)

- Assessed current state of university disability accessibility and accommodation.

Associate Dean Representative, UNT Committee on Space Management Policy (2007)

- Participated in development of a comprehensive university space management policy.

Administrative Representative, UNT Biology Building Construction Steering Committee (2006 – 2008)

- Provided administrative oversight for construction of \$33M biology research building.

Sub-committee Chair, College of Arts & Sciences Strategic Planning Committee (2005)

- Developed interdisciplinary and internationalization strategic objectives and action items for College's five year strategic plan.

Chair, College of Arts & Sciences Faculty Council (2004 – 2008)

- Faculty Council advises Dean on budget and policy issues.

Member, UNT Associate Deans Council (2004 – 2008)

Administrative Representative, UNT Chemistry Building Construction Steering Committee (2004 – 2005)

- Provided administrative oversight of construction of \$30M chemistry research building.

Member, UNT College of Arts & Sciences Faculty Council (2003 – 2004)

Member, UNT Chancellor's Tuition Task Force (2003)

- Appointed by Chancellor. Developed decision matrix for committee based on tuition pricing and elasticity models. Task force selected tuition pricing based on decision matrix and policy was implemented AY 2007.

Chair, College of Arts & Sciences Ad-hoc Appeals Committee (2003)

Chair, Undergraduate Affairs Committee, Department of Mathematics (2001 – 2004)

- Developed department's undergraduate assessment plan as part of SACS accreditation; directed changes to undergraduate mathematics major curriculum.

Senator, UNT Faculty Senate (2001 – 2002)

Consultant, UNT Student Financial Aid and Services (SFAS) Office (2001 – 2002)

- Developed analytical model to assess SFAS staffing requirements to evaluate proposed purchase of new phone center technology.

Member, UNT Committee on Organizational Structure of Engineering (2001)

- Committee prepared proposal submitted to the Texas Higher Education Coordinating Board for establishing a new college of engineering.

Member, Executive Committee, Department of Mathematics (2000 – 2003)

Chair, Retention and Recruitment Committee, Department of Mathematics (1999 – 2002)

Member, University Review Committee (1998 – 2002)

- Committee hears faculty appeals of promotion, merit and administrative decisions.

Coordinator of Probability and Statistics Courses, Department of Mathematics (1998 – 2002)

Chair, UNT Faculty Senate Budget Committee (1997 – 2001)

- Consulted with Provost and President on university budget priorities.
- Effectively represented Faculty Senate at university budget hearings, successfully advocating for increased faculty compensation.

PROFESSIONAL APPOINTMENTS AND EXPERIENCE

2007 – Present Professor, Department of Mathematics, University of North Texas.

2002 – Present Adjunct Professor, Department of Biostatistics, UNT Health Science Center.

1996 – 2007 Associate Professor, Department of Mathematics, University of North Texas.

1990 – 1996 Assistant Professor, Department of Mathematics, University of North Texas.

1992 – Present Private Consulting.

Consulting engagements have involved significant interaction with senior management of major corporations, resulting in bottom-line operational impact, university development opportunities, and student internships and employment. Selected client list:

Institute for Defense Analysis. U. S. National Security Agency sponsored work. Maintain active Top-Secret security clearance.

ABC TV Network. Report to ABC Vice President for Research. Performed statistical analysis of network pilot testing to identify factors influencing Nielson ratings and viewer attitudes. Evaluated viewer survey results for ABC pilot shows. Analysis used to select shows for subsequent TV seasons.

Southwest Airlines. Conducted statistics training sessions for Southwest Airlines Scheduling Department.

Argo Data Resource Corporation. Report to CEO. Advise on R&D of analytic products and services for top tier U.S. banks, including risk analysis and monitoring, employee staffing, employment assessment, least cost check routing, cash inventory optimization and customer relationship management.

Frank N. Magid Associates. Developed viewer segmentation and market share models for leading entertainment companies and news organizations including Electronic Arts, NBC, ABC News, Alta Vista, Yahoo, Namco and Fox TV.

IBM. Developed statistical models for real-time targeting of advertisement/content to Internet website visitors. Developed proposal for using IBM data mining tools to detect intrusions into U.S. Air Force intranet sites.

TNS. Performed market research analysis for consortium of beverage manufacturers.

Accenture (previously Anderson Consulting). Developed and implemented analysis tools which improved efficiency of aluminum finishing process for Alumax Inc.

PricewaterhouseCoopers/Applied Decision Analysis. Developed probability model and analytic optimization techniques for capacity expansion problems in the electric utility industry.

Federal Emergency Management Agency. Performed system and statistical decision analysis to predict call center volume and recommend staffing levels.

Dallas-Fort Worth International Airport. Conducted statistical analysis seminars for operations, planning and public safety departments.

America's Cash Express. Reported to CEO. Developed and managed software implementation of cash inventory forecasting system. Developed and implemented statistical methods to detect noncompliance by store managers with cash management protocols. Analyzed check verification procedures in order to minimize risk and increase yield.

1987 – 1990 Associate, Daniel H. Wagner Associates.

- Project manager and lead analyst for several projects that developed and implemented tactical decision tools for the U.S. Navy and Army.
- Responsibilities included management of technical staff, interaction with senior defense officers, algorithm development and foreign travel.

SERVICE TO THE PROFESSION

Founding President, Mathematical Association of America (MAA) Special Interest Group for Business, Industry and Government (2000 – 2007)

- Group serves as unifying link between business, industry and government mathematicians, academic mathematicians and mathematics students.
- Wrote charter, recruited charter members, initiated membership programs and services.
- Chaired business meetings and member receptions.

Associate Editor, Case Studies in Business, Industry and Government Statistics (2006 – Present)

Member, MAA Committee on Minicourses (2006-2009)

- Reviewed reviews proposals for shortcourses at MAA national meetings.

Member, MAA Council on Meetings (2000 – 2006)

- Advised MAA Executive Committee and professional staff on programs and meeting content.

Math Horizons Editorial Board (2000 – 2003)

Member, MAA MathFest Planning Committee (2000 – 2003)

Member, MAA Special Interest Group Task Force (1999 – 2006)

SIAM Visiting Lecturer Program (1998 – Present)

- Popular lecturer in SIAM program, presenting talks on career opportunities and applications of mathematics.

Chair, MAA Committee on Industrial and Government Mathematics (1998 – 2004)

- Fostered partnerships between the academic mathematics community and industry and government mathematicians.
- Conducted first large-scale MAA membership survey. Survey results helped motivate development of MAA special interest groups.
- Expanded participation of business, industry and government mathematicians in MAA through listserv, special sessions at meetings and networking receptions.

Member, MAA Development Committee (1998 – 2002)

Member, MAA Strategic Planning Committee (1998 – 2000)

- Represented business, industry and government MAA members on strategic planning committee.

Judge, Intel 1998 International Science and Mathematics Fair (1998)

COMMUNITY SERVICE

City Council Appointed Member, City of Denton Traffic Commission (2000 – 2001)

Mayoral Appointed Member, City of Denton Capital Improvements Committee (1999 – 2000)

Vice President, City of Denton Main Street Association (1998 – 2000)

- Association promotes central business district revitalization in historic downtown.
- Managed overall budget for association and budgeted special events.
- Increased return on Association capital through appropriate investment strategies.

Mayoral Appointed Member, City of Denton Main Street Association (1994 – 1998)

Big Brother, Big Brothers/Big Sisters (1992 – 2001)

RESEARCH ACTIVITIES

General interests: Interdisciplinary applications of mathematics and statistics, stochastic optimal control, resource allocation, statistical decision analysis.

Current research program: Agent models in coupled natural-human systems, control of momentum processes.

Sponsored Research (Total Funding: > \$2 M)

Texas Parks and Wildlife Department State Wildlife Grant, Co-PI with the Houston Advanced Research Center, \$200,000 (2008-2010).

NSF Human and Social Dynamics Exploratory Grant, Consultant, \$124,038 (2007 – 2010).

NSF Biocomplexity in the Environment Grant – Supplemental Award, Co-PI, \$49,900 (2007).

NSF Biocomplexity in the Environment Grant – Supplemental Award, Co-PI, \$69,900 (2004 – 2005).

NSF Biocomplexity in the Environment Grant, Co-PI, \$566,000 (2002 – 2007).

NSF Interdisciplinary Grants in the Mathematical Sciences, PI, \$100,000 (2001 – 2002).
NSF Quantitative Environmental and Integrative Biology Grant, Co-PI, \$90,000 (2001 – 2004).
NSF Research Experience for Undergraduates, Co-PI, \$6000 (2003).
NSF Computer Science, Engineering and Mathematics Scholarship Program, PI, \$220,000 (2000 – 2004).
NSF Computation and Social Systems Grant, Co-PI, \$390,000 (2000 – 2004).
Office of Naval Research Grant within Underwater Research Initiative, Co-PI, \$350,000 (1993 – 1995).
NSF Small Business Innovative Research Grant, Co-PI, \$50,000 (1992 – 1993).
City of Denton, PI, \$64,000 (1997 – 1998).
Paradigm Simulation, Inc., PI, \$70,000 in-kind (1997 – 1998).

Publications

“Interdisciplinarity in the Biological Sciences. In: Handbook of Interdisciplinarity.” Eds., R. Frodeman, C. Mitchum and J.B. Hollbrok. Warren Burggren, Kent Chapman, Bradley Keller, Michael Monticino and John Torday. Oxford University Press, 2010.

“Bridging the gaps between design and use: developing tools to support environmental management and policy,” B.S. McIntosh, C. Giupponi, A. Voinov, C. Smith, K.B. Matthews, M. Monticino, M.J. Kolkman, N. Crossman, M. van Ittersum, D. Haase, A. Haase, J. Mysiak, J.C.J. Groot, S. Sieber, P. Verweij, N. Quinn, P. Waeger, N. Gaber, D. Hepting, H. Scholten, A. Sulis, H. van Delden, E. Gaddis, H. Assaf. In: Jakeman, T., Rizzoli, A., Voinov, A. & Chen (eds.) *State of the Art and Futures in Environmental Modelling and Software*, Elsevier, 2009.

“Aspirational Goals and Incremental Tools: Does forecasting exclude other frameworks for strategic planning?,” Gregory Hill, Michael Monticino, Eric T. Jones, Steven Kolmes, and Rebecca McLain. *Proceedings of the 11th Directions and Implications Advanced Computing Symposium – 2008: Tools for Participation, Collaboration, Deliberations and Decision Support*. University of California, Berkeley, Computer Professionals for Social Responsibility Directions and Implications of Advanced Computing Conference Proceedings, 2008.

“Optimal buy/sell rules for correlated random walks,” Pieter Allaart and Michael Monticino. *Journal of Applied Probability*, Vol 45, 33-44, 2008.

“Models of Natural and Human Dynamics in Forest Landscapes: cross-site and cross-cultural synthesis,” Miguel F. Acevedo, Baird Callicott, Michael Monticino, Donald Lyons, Jenny Palomino, Judith Rosales, Luz Delgado, Magdiel Ablan, Jacinto Davila, Hirma Ramirez, Emilio Vilanova, Giorgio Tonella. *Geoforum*, Vol 39, 846-866, 2008.

“Biocomplexity and Conservation of Biodiversity Hotspots: Three Case Studies from the Americas,” J. Baird Callicott, Ricardo Rozzi, Luz Delgado, Michael Monticino, Miguel Acevedo and Paul Harcombe. *Philosophical Transactions of the Royal Society of London B – Biological Sciences*, Vol. 362, 2007, 321-333.

“Analysis of Teller Service Times in Retail Banks,” Travis Cogdill and Michael Monticino. *Case Studies in Business, Industry and Government Statistics*, Vol 1 No. 1, 15-25, 2007.

- “Coupled Human and Natural Systems: A Multi-Agent Based Approach,” Michael Monticino, Miguel Acevedo, Baird Callicott, Travis Cogdill and Christopher Lindquist. *Environmental Modelling and Software*, Vol. 22(5), 656-663, 2007.
- “Applying a Multi-Agent Model to Evaluate Effects of Development Proposals and Growth Management Policies on Suburban Sprawl,” M. Monticino, E. Brooks, T. Cogdill, M. Acevedo and B. Callicott. In Voinov, A., Jakeman, A., Rizzoli, A. (eds.). *Proceedings of the iEMSs Third Biennial Meeting: Summit on Environmental Modelling and Software*, 2006.
- “Biocomplexity in the Big Thicket,” Baird Callicott, Miguel Acevedo, Pete Gunter, Paul Harcombe, Christopher Lindquist and Michael Monticino. *Ethics, Place, Environment: A Journal of Philosophy and Geography*, Vol 9, No. 1, 21-45, 2006.
- “Assessing physiological complexity,” W. Burggren and M. Monticino. *Journal of Experimental Biology*, Vol. 208, 3221-3232, 2005.
- “Multi-agent model of human values and land-use change,” Michael Monticino, Miguel Acevedo, Baird Callicott and Travis Cogdill. *Proceedings of the Fifth International IASTED Conference on Modeling, Simulation and Optimization*, ed. Giorgio Tonella, 279-284, 2005.
- “Coupled Human and Natural Systems: A Multi-Agent Based Approach,” Michael Monticino, Miguel Acevedo, Baird Callicott, Travis Cogdill, and Christopher Lindquist). *Complexity and Integrated Resources Management, Transactions of the 2nd Biennial Meeting of the International Environmental Modelling and Software Society*, iEMSs, Pahl-Wostl, C., Schmidt, S., Rizzoli, A.E. and Jakeman, A.J. (eds.), Osnabruck, Germany, 2004.
- “Effects of Culture on Computer-Supported International Collaborations,” Kathleen Swigger, Ferda Alpaslan, Robert Brazile, and Michael Monticino. *International Journal of Human-Computer Studies*, Vol 60, Issue 3, 365-380, 2004.
- “Pseudo-prophet inequalities in average-optimal stopping,” Pieter Allaart and Michael Monticino. *Sequential Analysis*, Vol 22, No. 3, 233-239, 2003.
- “Cell interaction in semi-Markov forest landscape models,” Michael Monticino, Miguel Acevedo and Travis Cogdill. In Rizzoli, A.E. and Jakeman, A.J. (eds.), *Integrated Assessment and Decision Support, Proceedings of the First Biennial Meeting of the International Environmental Modelling and Software Society*, iEMSs: Manno, Switzerland, 227-233, 2002.
- “How to a construct random probability measure,” M.G. Monticino. *International Statistical Review*, Vol 69, No. 1, 153-167, 2001.
- “Optimal stopping rules for directionally reinforced processes,” Pieter Allaart and Michael Monticino. *Advances in Applied Probability*, Vol 33, No. 2, 483-504, 2001.
- “Constructions of random distributions via sequential barycenters,” Theodore Hill and Michael Monticino. *Annals of Statistics*, Vol. 26, No. 4, 1242-1253, 1998.
- “Constructing prior distributions with trees of exchangeable processes,” M.G. Monticino. *Journal of Statistical Planning and Inference*, Vol. 73, 113-133, 1998.
- “Web-Analysis: Stripping away the hype,” M.G. Monticino. *IEEE Computer*, 130-132, December 1998.
- “Directionally reinforced random walks,” R. D. Mauldin, M.G. Monticino and H. von Weizsacker. *Advances in Mathematics*, Vol. 117, No. 2, 239-252, 1996.

“Optimal cut-off strategies in capacity expansion problems,” M.G. Monticino and J. R. Weisinger. *Naval Research Logistics*, Vol. 42, 1021-1039, 1995.

“Randomly generated distributions,” R. D. Mauldin and M.G. Monticino. *Israel Journal of Mathematics*, Vol. 91, 215-237, 1995.

“A survey of the search theory literature,” S. J. Benkoski, M.G. Monticino and J. R. Weisinger. *Naval Research Logistics*, Vol. 38, 469-494, 1992.

“Utility functions which ensure the adequacy of stationary strategies,” M.G. Monticino. *Transactions of the American Mathematical Society*, Vol. 325, No 1, 187-204, 1991.

“The adequacy of universal strategies in analytic gambling problems,” M.G. Monticino. *Mathematics of Operations Research*, Vol. 16, No 1, 21-41, 1991.

“The feasibility of applying search theory to the Korean tunnel problem,” M.G. Monticino and J. R. Weisinger. *Technical Report to the Commander Belvoir Research, Development and Engineering Center, U.S Army*, July 1989.

“The effects of non-homogenous environments on passive sonobuoy search for a submerged target,” M.G. Monticino and S. J. Benkoski. *Technical Report to the Naval Oceanographic Research and Development Activity*, December 1988.

Numerous proprietary or classified analysis reports for consulting clients, including statistical analysis, algorithm descriptions and software implementation documentation.

Presentations

Plenary and Honorary Lectures

University of Economics, Ho Chi Minh City, Vietnam. “Teller staffing in retail banks – applications of forecasting and queuing analytics.” 2008

International University, Ho Chi Minh City, Vietnam. “Search theory – theory and applications.” 2008

International Association of Science and Technology for Development Asian Conference on Modelling and Simulation, Beijing, China. “Eliciting, calculating and implementing decision analysis utility functions in multi-agent systems.” 2007

Big Thicket Science Conference, Beaumont, Texas. “Modeling coupled natural-human systems in the Big Thicket and beyond: a guide to land-use/land-cover public policy.” 2007

Universidad Autonoma del Estado de Mexico, Toluca, Mexico. “Buy/sell strategies for correlated random walks.” 2006

International Symposium on Mathematical Methods Applied to the Sciences, San José, Costa Rica. “Optimal stopping of momentum processes.” 2006

Big Thicket Science Conference, Beaumont, Texas. “Coupled biological and human systems: a multi-agent based model.” 2003

St. Edwards University Career Symposium, Austin, Texas. “Careers in mathematics.” 2003

Invited Conference and Colloquium Speaker

- Rhodes College. SIAM Visiting Lecturer Program Speaker: “Search Theory: Mathematical Framework for Finding Lost Objects.” 2010
- Council of Colleges of Arts & Sciences Annual Meeting, Baltimore, Maryland. “Strategies for Productive Relationships between the College of A&S and the Graduate School.” Panelist. 2009.
- US International Association for Landscape Ecology, Symposium on Complexity in Human-Nature Interactions, Snowbird, Utah. “Modeling Coupled Natural and Human Systems: Cross-Site and Cross-Cultural Synthesis.” 2009
- University of Texas, Arlington. SIAM Visiting Lecturer Program Speaker: “Real math, real applications.” 2009
- ARGO Data Resources Technical Advisory Board Conference, Dallas, Texas. “Analytic Initiatives in the Banking Industry.” 2008
- Houston-Galveston Aquatic Nuisance Species Workshop, Houston, Texas. “Integrating social behavior and ecological systems in multi-agent models.” 2007
- American Physiological Society Intersociety Conference, Virginia Beach, Virginia. “The emperor’s clothes: an applied mathematician’s view of complexity.” 2006
- AMS/MAA Joint Meetings, San Antonio, Texas. Introductory remarks for invited address by Naomi Fisher, Mathematicians and Education Reform Director. 2006
- Tarleton State University. SIAM Visiting Lecturer Program Speaker: “Applied mathematics in business, industry and government.” 2005
- Argo Data Resource Advisory Board Meeting, Dallas, Texas. “Workforce management planning tools.” 2004
- Frank Magid Associates, Marion, Iowa. “Multivariate statistical analysis: Emerging techniques.” 2003
- St. Edwards University Career Symposium. “Beyond your bachelor degree.” 2003
- Texas Association of Academic Administrators in the Mathematical Sciences Annual Meeting, Waco, Texas. “Increasing awareness of career opportunities in mathematics.” 2003
- NSF Workshop on Probability and Statistics Teaching. “Applying statistics and probability to solve real-world problems.” 2002
- MAA Texas Section Meeting, Dallas, Texas. “Careers in applied mathematics.” 2002
- Southwestern University. SIAM Visiting Lecturer Program Speaker: “Mathematical search theory.” 2001
- Merck & Co., Inc., New Jersey. “Applications of nonparametric random probability measure constructions.” 2000
- University of Memphis. 1999
- “How to stop on the average: applications of random probability measures.”
 - SIAM Visiting Lecturer Program Speaker: “Careers in applied mathematics: a personal perspective.”
- University of Northern Michigan. 1999

- “Applied search theory.”
- SIAM Visiting Lecturer Program Speaker. “Careers in applied mathematics: a personal perspective.”

Oklahoma State University. SIAM Visiting Lecturer Program Speaker: “Foundations of mathematical search theory.” 1999

Texas A & M – Commerce. “Applications of random probability measure constructions.” 1999

Georgia Institute of Technology. “Random probability measures.” 1999

Institute for Defense Analysis – Center for Communications Research, San Diego, CA.
“Random probability measure constructions.” 1999

University of Tulsa. SIAM Visiting Lecturer Program Speaker. “Preparing for a career in applying mathematics.” 1998

Trinity University. SIAM Visiting Lecturer Program Speaker. “Applications of mathematical search theory.” 1998

Southwest Texas State University. SIAM Visiting Lecturer Program Speaker. “Preparing for a career in applying mathematics.” 1998

Tarleton State University. SIAM Visiting Lecturer Program Speaker. “Non-academic careers in mathematics.” 1998

Bose Memorial Conference on Statistical Planning, Fort Collins, CO. “Constructing prior distributions from trees of exchangeable processes.” 1995

Georgia Institute of Technology. “Mathematical Search Theory.” 1994

Sam Houston State University. “Search, gambling and information.” 1994

Wagner Associates, Santa Clara, CA. “Applications of directionally reinforced random walks in ocean structure models.” 1994

Texas Christian University. “Some theoretical gambling problems.” 1993

Wagner Associates, Santa Clara, CA. “Continuous-time gambling problems.” 1992

University of Miami. “Random distribution functions through random rescaling.” 1991

Conference Organizing and Presentations

Annual Meeting of the AMS/MAA, San Francisco, CA. 2010

- Co-organizer for MAA invited paper session “Mathematics experiences in business, industry and government.”

Member of International Program Committee for IASTED Asian Conference on Modeling and Simulation, Beijing, China. 2009

Annual Meeting of the AMS/MAA, Washington, DC. 2009

- Co-organizer for MAA invited paper session “Mathematical experiences in business, industry and government.”
- “Least cost check routing.” Special session on applications of mathematics.

Member of International Program Committee for IASTED Africa Conference on Modeling and Simulation, Botswana, Africa. 2008

“Application of Mathematical Models to Classify and Characterize Cell Types Derived from Neural Progenitor Cells,” J. Dau, E. Lightfoot, H. D. Schwark, M. Monticino and J. Fuchs. *Poster at Annual Meeting of the American Society for Cell Biology*, #566204, San Francisco, December 2008.

Member of International Program Committee for IASTED Asian Conference on Modeling and Simulation, Beijing, China. 2007

Annual Meeting of the AMS/MAA, New Orleans, LA. 2007

- Co-organizer for MAA invited paper session “Mathematical experiences in business, industry and government.”
- “Teller service times and staffing in retail banks.” Special session on applications of mathematics.
- President of Business, Industry and Government Special Interest Group of the MAA (chaired executive committee meeting and hosted reception).

International Environmental Modelling and Software Society International Summit, Burlington, VT. 2006

- “Applying a multi-agent model to evaluate effects of development proposals and growth management policies on suburban sprawl.” Special session speaker.
- Workshop participant, “Developing Tools to Support Management and Policy.”

Annual Meeting of the AMS/MAA, San Antonio, TX. 2006

- Participant on panel discussion on career opportunities for undergraduate math majors.
- Co-organizer for MAA invited paper session “Mathematical experiences in business, industry and government.”
- “Optimal buy/sell rules for correlated random walks.” Contributed paper session.
- “Teller staffing in retail banks.” Special session on applications of mathematics.

International Association of Science and Technology for Development 5th International Conference on Modeling, Simulation and Optimization, Oranjestad, Aruba. “Multi-agent model of human values and land-use change.” 2005

Annual Meeting of the AMS/MAA, Atlanta, GA. 2005

- Participant on panel discussion on career opportunities for undergraduate math majors.
- Co-organizer for MAA invited paper session “Mathematical experiences in business, industry and government.”

International Environmental Modelling and Software Society International Conference, Osnabrück, Germany. “Coupled human and natural systems: a multi-agent based approach.” (2004)

Annual Meeting of the AMS/MAA, Phoenix, AZ. 2004

- Co-organizer for MAA invited paper session “Mathematical experiences in business, industry and government.”
- “A leg in both worlds: consulting in academics.” Special session on applications of mathematics.

Annual Meeting of the American Mathematical Society, Baltimore, MD. 2003

- Co-organizer for MAA contributed papers session on “Experiences in Business, Industry and Government Mathematics.”

Annual Meeting of the American Mathematical Society, San Diego, CA. 2002

- Moderator for panel discussion on “Projects in Business, Industry and Government.”
- Moderator for panel discussion on “Career Tracking of Mathematics Majors.”

Annual Meeting of the American Mathematical Society, New Orleans, LA. 2001

- “Optimal stopping rules for directionally reinforced process.” Contributed paper session.
- Moderator for panel discussion on “Mathematics in Industry.”

Annual Meeting of the American Mathematical Society, Washington, D.C. “How to stop well on the average.” 2000

Joint Meeting of the American and Mexican Mathematical Societies, Denton, TX. “Applications of random probability measures.” 1999

Annual Meeting of the American Mathematical Society, San Antonio, TX. “Multi-dimensional sequential barycenter arrays.” 1999

Annual Meeting of the American Mathematical Society, San Diego, CA. “Sequential barycenter arrays and random probability measures.” 1997

Annual Meeting of the American Mathematical Society, Orlando, FL. “Directionally reinforced processes on graphs.” 1996

Annual Meeting of the American Mathematical Society, San Francisco, CA. “Strategic planning for capacity expansion under uncertainty.” 1995

Annual Meeting of the American Mathematical Society, San Antonio, TX. “Multi-dimensional sequential barycenter arrays.” 1993

Annual Meeting of the American Mathematical Society, Baltimore, MD. “Markov gambling problems – minimizing time to a goal.” 1992

Texas Section Meeting of the MAA, Nacogdoches, TX. “Exchangeable tree priors.” 1991

SE Section Meeting of the American Mathematical Society, Tampa, FL. “Exchangeable trees and random rescaling.” 1991

Professional Organization Membership

American Mathematical Society, Mathematical Association of American, International Environmental Modelling and Software Society, International Association of Science and Technology for Development

Journal and Grant Proposal Reviewer

Mathematics of Operations Research, Operations Research, Annals of Statistics, Environmental Modelling and Software, Journal of Environmental Management, Advances in Mathematics, IASTED,

TEACHING AND GRADUATE MENTORING

Study Abroad

Invited Instructor, International University, Ho Chi Minh City, Vietnam. 2008

- Taught short courses in statistics and probability to top Vietnamese students at the International University. Met with rectors at the University of Economics, HCMC, the University of Navigation, HCMC, and the International University, HCMC to identify collaboration opportunities with UNT in research and student exchange. As a result, an MOU was recently signed between UNT and the International University, HCMC.

Instructor, Spain Field School – University of Alicante, Alicante, Spain. 2006

- Course focused on modeling vegetation recovery after disturbance in grass and shrub ecosystems. Project promoted scientific exchange as well as collaboration in educational activities for undergraduate and graduate students in Spain and the USA.

Instructor, Research Experiences for Undergraduates, Alicante, Spain. 2005

- NSF supported research in vegetation dynamics and watershed modeling in Mediterranean environments with UNT undergraduate and graduate students.

Classroom Instruction

Undergraduate Courses

Statistics, Probability, Discrete Mathematics, Calculus, Multi-variable Calculus, Real Analysis

Graduate Courses

Stochastic Processes, Bayesian Decision Theory, Measure-theoretic Probability, Categorical Data Analysis, Martingale Theory, Stochastic Optimal Control, Multivariate Statistics, Probability Models, Markov Processes

Student Mentoring

- Currently mentoring 1 PhD student and 1 undergraduate student.
- Thesis advisor and graduated 13 Masters and PhD students
- Mentored 7 undergraduate research/internship projects.
- Member of 10 PhD thesis committees for students in mathematics, finance and environmental science.